Electrical Specifications (Cont.)

Specifications valid at $48V_{IN}$, 100% rated load and 25ºC ambient, unless otherwise indicated.

Environmental Qualification		
• IPC-9592A, based on Class II Category 2 the following detail is applicable.		
Test Description	**Test Detail**	**Min. Quanity Tested**
5.2.3 HALT (Highly Accelerated Life Testing)	Low temp	3
	High temp	3
	Rapid thermal cycling	3
	6 DOF random vibration test	3
	Input voltage test	3
	Output load test	3
	Combined stresses test	3
5.2.4 THB (Temperature Humidity Bias)	(72hr presoak required) 1000hrs – continuous bias	30
5.2.5 HTOB (High Temperature Operating Bias)	Power cycle – On 42 minutes Off 1 minute, On 1 minute, Off 1 minute, On 1 minute, Off 1 minute, On 1 minute, Off 1 minute, On 1 minute, Off 10 minutes. Alternating between maximum and minimum operating voltage every hour.	30
5.2.6 TC (Temperature Cycling)	700 cycles, 30 minute dwell at each extreme – 20C minimum ramp rate	30
5.2.7 PTC (Power & Temperature Cycling)	Reference IPC-9592A	3
5.2.8 – 5.2.13 Shock and Vibration	Random Vibration – Operating IEC 60068-2-64 (normal operation vibration)	3
	Random Vibration Non-operating (transportation) IEC 60068-2-64	3
	Shock Operating - normal operation shock IEC 60068-2-27	3
	Free fall - IEC 60068-2-32	3
	Drop Test 1 full shipping container (box)	1
5.2.14 Other Environmental Tests	5.2.14.1 Corrosion Resistance – Not required	N/A
	5.2.14.2 Dust Resistance – Unpotted class II GR-1274-CORE	3
	5.2.14.3 SMT Attachment Reliability IPC-9701 - J-STD-002	N/A
	5.2.14.4 Through Hole solderability – J-STD-002	5
ESD Classification Testing	HBM testing – JESD22-A114D	3
Total Quantity (estimated)		**138**

Application Characteristics: Waveforms

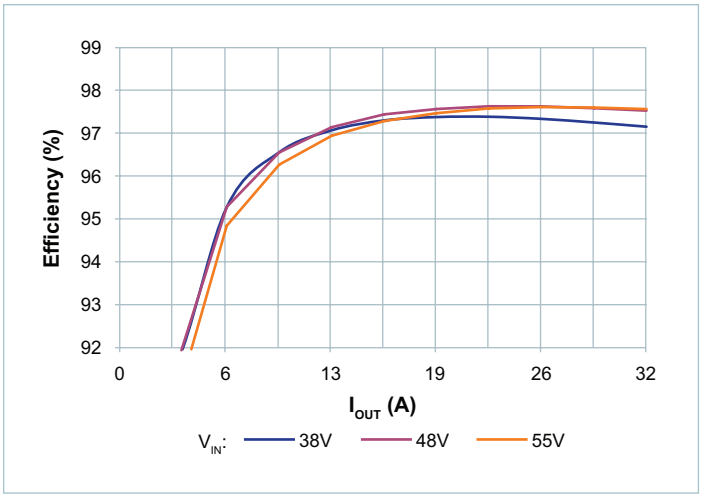

Figure 1 — *Efficiency vs. output current, 25°C ambient*

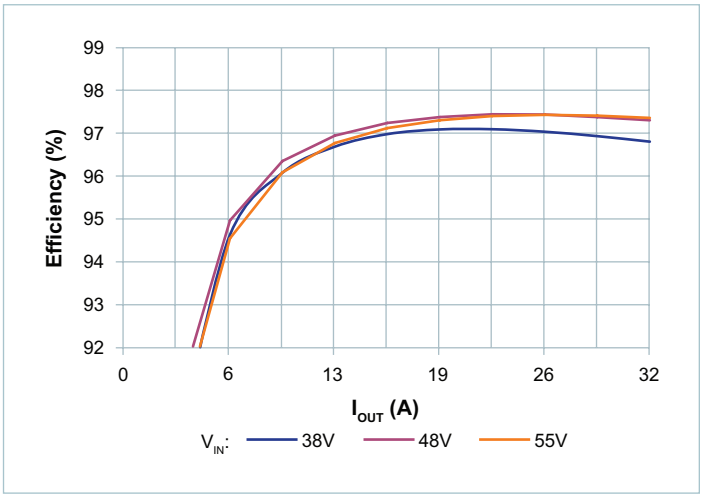

Figure 2 — *Efficiency vs. output current, 55°C ambient*

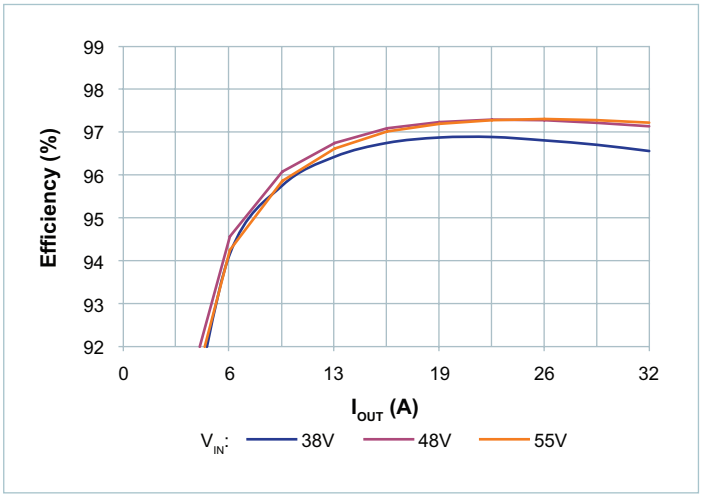

Figure 3 — *Efficiency vs. output current, 70°C ambient*

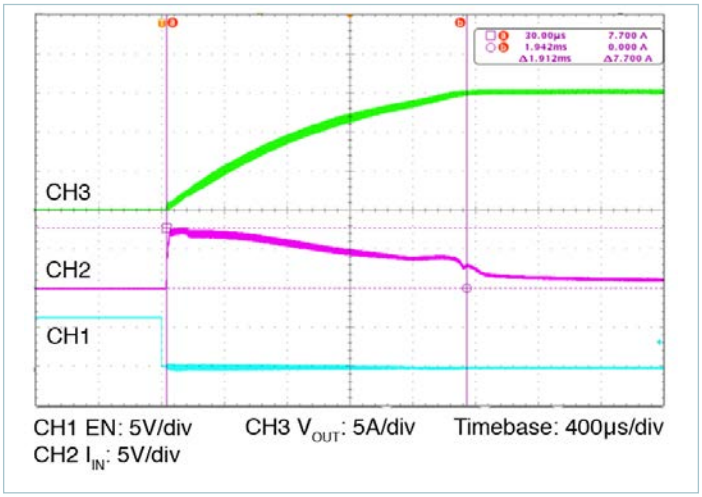

Figure 4 — *Inrush current at high line, 15% load*

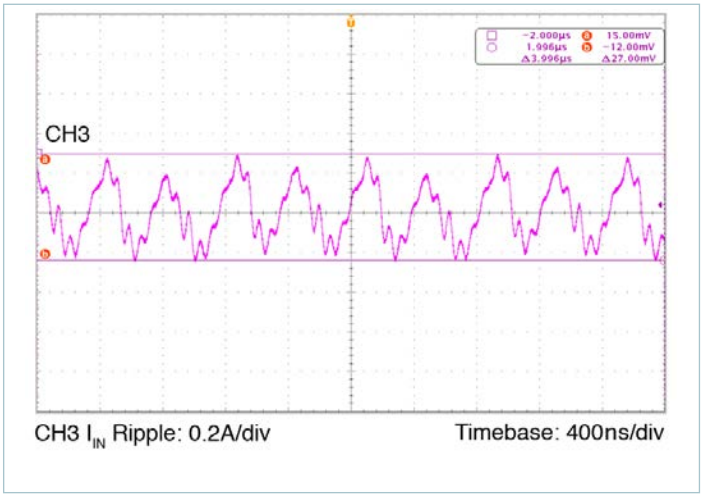

Figure 5 — *Input reflected ripple current at nominal line, full load*

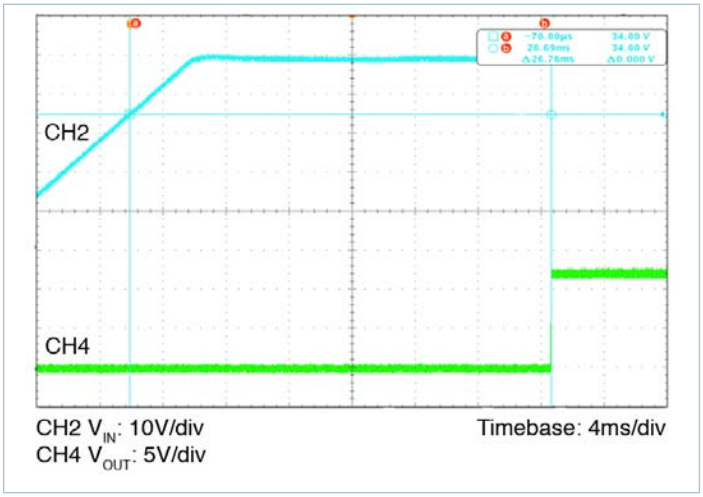

Figure 6 — *Turn on delay time; V_{IN} turn on delay at nominal line, 15% load*

Application Characteristics: Waveforms (Cont.)

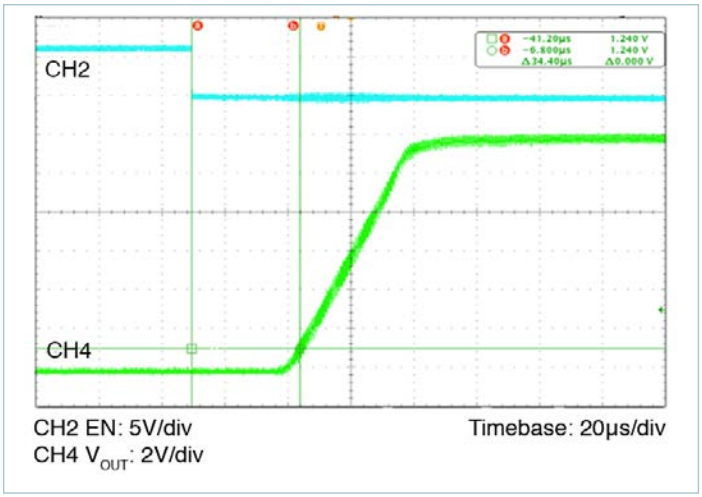

Figure 7 — *Turn on delay time; enable turn on delay at nominal line, 15% load*

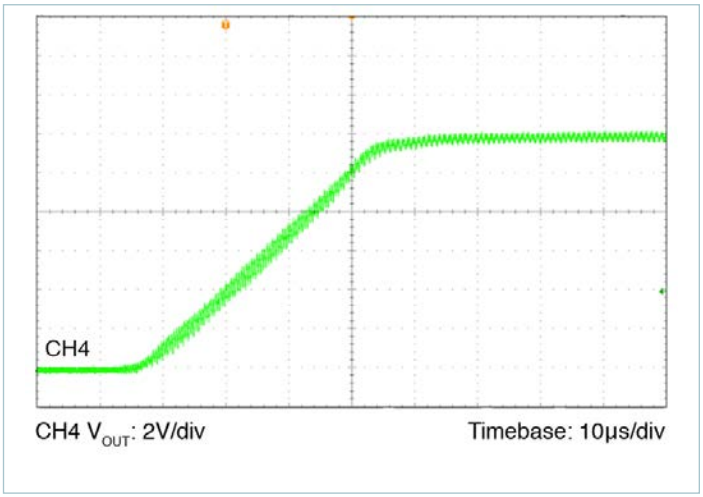

Figure 8 — *Output voltage rise time at nominal line, 10% load*

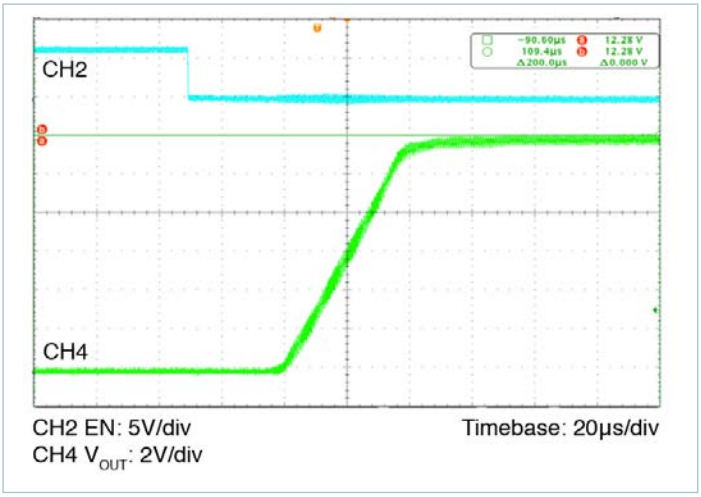

Figure 9 — *Overshoot at turn on at nominal line, 15% load*

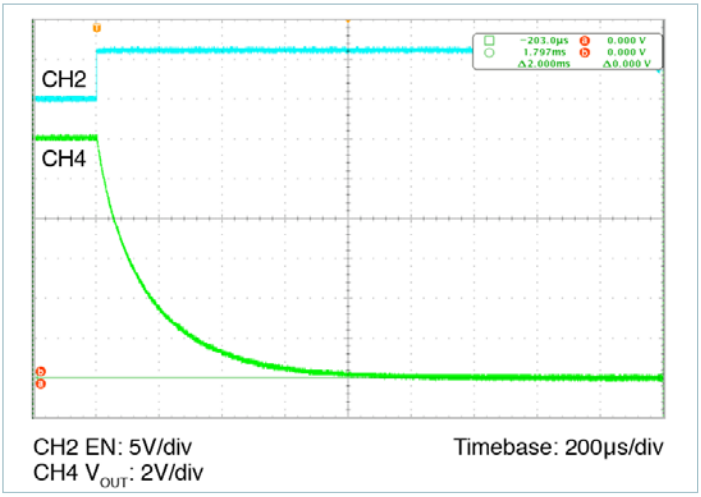

Figure 10 — *Undershoot at turn off at nominal line. 10% load*

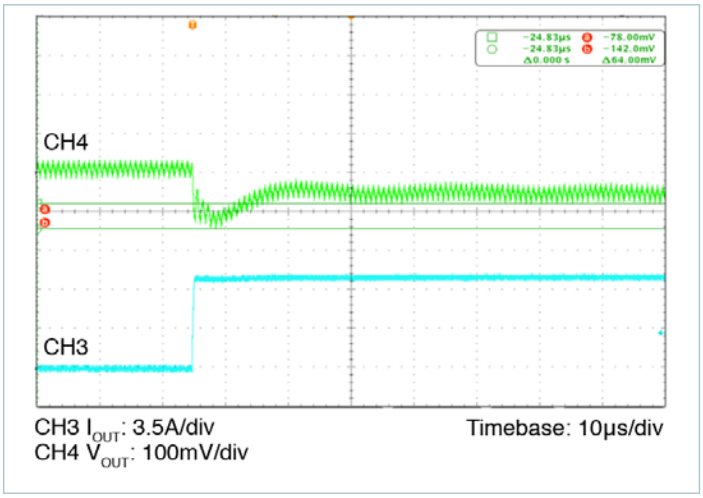

Figure 11 — *Load transient response; nominal line Load step 75–100%*

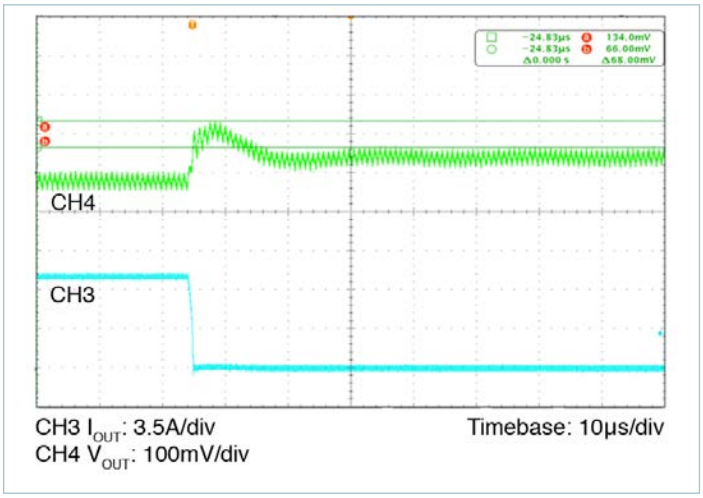

Figure 12 — *Load transient response; full load to 75%; nominal line*